

## Macrolepidoptera in Rainham, South-West Essex

By Dr. GADEN S. ROBINSON\*

Rainham is an eastward extension of the east London conurbation and juts into the green belt 4 km. north of the Thames. The northern half of Rainham comprises a housing estate of roughly rectangular shape with my garden half-way along the eastern edge of the rectangle. The northern boundary of the rectangle is an artificial lake, Berwick Pond. This lake was established in its present form at least as early as 1840 and probably for some time before then. It was probably the manor-house fish-pond. It is now heavily silted—but still heavily fished—and has extensive beds of *Phragmites* and *Typha* and a total area of about 50,000 m<sup>2</sup>. At the western end of the pond lies Abbey Wood, a small (3 ha.), wet wood with some mature oak, willow and poplar. Abbey Wood separates Berwick Pond from the small area of water-meadow on the eastern bank of the Ingrebourne River. The south-eastern bank of Berwick Pond is less than 200 m. north of the site of the M.V. trap which I have operated in my garden since the beginning of 1976. North of the lake lies a large area of unrestored gravel-workings and there is arable farm-land to the east and south of the trap. There are some small woods about 2 km. east of the trap-site and Rainham Marshes are 3 km. to the south-west.

The records below are based on captures in the M.V. trap which is operated at weekends and on "good" nights during the week. They are also based on extensive collecting at sugar in Abbey Wood during 1976 and some collecting at a portable fluorescent light in Abbey Wood and at the western edge of Berwick Pond. Sugaring was enormously successful during 1976 when I established a "round" of eight fixed treacle-stripes on tree-trunks, replenishing the sugar two or three times a week through August and September. Results were spectacular with between five- and seven-hundred moths occupying the eight treacle-stripes each night. While the diversity of the species at sugar was low (most individuals were *Mythimna pallens*), species such as *Dypterygia scabriuscula* (L.), *Catocala nupta* (L.) and *Celaena leucostigma* (Hübner) were relatively abundant—the more surprising as they were of only occasional occurrence in the trap.

My notes to date record a total of 17 species of Rhopalocera and 191 species of Macroheterocera from Rainham. Complete records have been lodged with the Biological Records Centre. An up-to-date catalogue of the Macrolepidoptera of Essex has recently been published (Firmin *et alii*, 1975) and, despite the bizarre nomenclature used, this work provides a standard for the comparison of further observations. I have, therefore, included here only records or observations which may be complementary or contradictory to this work and I have omitted listing species which are already recorded in the "Essex list" as being common on Thames-side. My

\* 21 Lakeside, Rainham, Essex.

records of Microlepidoptera from Rainham, among which the Tortricoidea and Tineidae (*sensu stricto*) are most strongly represented, are not recorded here as they will be included in the check-list of Essex Microlepidoptera now in preparation.

The most notable feature of the Macroheterocera of this locality is the strong representation of "good" marsh species originating from Berwick Pond.

#### GEOMETRIDAE

*Xanthorhoe quadrifasciata* (Clerck)—a single worn example in 1976. *Horisme tersata* (D. & S.)—single fresh example on 22.vii.1977. *Eupithecia intricata arceuthata* (Freyer)—not uncommon: several examples in 1976 and 1977. *Eupithecia venosata venosata* (F.)—single fresh specimen on 12.vi.1977. *Eupithecia subumbrata* (D. & S.)—several in 1976: specimen retained dated 26.vi.1976. *Semiothisa alternaria* (Hübner)—single specimen on 3.vii.1976. *Semiothisa liturata* (Clerck)—a pair in 1976: not seen in 1977. *Aspitates ochreararia* (Rossi)—one or two in 1976, probably from the south.

#### NOTODONTIDAE

*Ptilodontella cucullina* (D. & S.)—single fresh specimen on 10.vii.1976.

#### ARCTIIDAE

*Thumatha senex* (Hübner)—a pair in late July 1977, one at Berwick Pond and one in the M.V. trap.

#### NOCTUIDAE

*Spaelotis ravidia* (D. & S.)—about a dozen in 1976 and half that number in 1977. *Lacanobia suasa* (D. & S.)—three or four each year, including melanic specimens with obscured markings. *Hadena perplexa perplexa* (D. & S.)—single specimen on 15.vi.1976. *Mythimna straminea* (Treitschke)—first recorded on 16.vii.1977 and at least one more the following month. *Aporophyla lutulenta lutulenta* (D. & S.)—moderately common. *Amphipyra pyramidea pyramidea* (L.)—with the next species common at sugar at Abbey Wood: the two species about equally abundant in 1976. *Amphipyra berbera svenssoni* Fletcher—see *pyramidea*. *Mormo maura* (L.)—four or five at sugar at Abbey Wood in 1976. *Dypterygia scabriuscula* (L.)—fairly frequent at sugar at Abbey Wood, 1976: three or four at M.V., 1976 and 1977. *Apamea oblonga* (Haworth)—one on 11.viii.1977. *Apamea remissa* (Hübner)—a few at M.V., 1976 and 1977. *Apamea unanimis* (Hübner)—as *remissa*—uncommon. *Oligia versicolor* (Borkhausen)—one determined from ♂ genitalia in late July 1976 and another in 1977: apparently these are only the second and third Essex records. *Photodes pygmina* (Haworth)—scarce, one or two each year. *Celaena leucostigma* (Hübner)—common at sugar at Abbey Wood and occasionally taken at M.V. *Nonagria typhae* (Thunberg)—common at M.V. and in *Typha* stems

at Berwick Pond. *Archanara geminipuncta* (Haworth) — common at M.V. and at Berwick Pond. *Archanara dissoluta* (Treitschke) — one on 10.vii.1976. *Archanara sparganii* (Esper) — common at M.V. and at Berwick Pond. *Rhizedra lutosa* (Hübner) — common late in the year as *sparganii* finishes. *Arenostola phragmitidis* (Hübner) — uncommon: two or three each year at M.V. and at Berwick Pond. *Chilodes maritimus* (Tauscher) — not seen in 1976 but quite common at M.V. at the end of July 1977.

### Acknowledgements

I am most grateful to my colleagues at the British Museum (Natural History), Mr. D. S. Fletcher and Mr. D. J. Carter, for their help with the determination of certain species and to Dr. K. Sattler for his advice during the preparation of the manuscript.

### Reference

Firmin, J. *et alii*, 1975. *A guide to the butterflies and larger moths of Essex*. 152 pp., 4 pls., 1 map. Fingringhoe Wick.

## Notes and Observations

THE USE OF THE ROTHAMSTED TRAP. — Having read Mr. Burton's note in the December issue of last year, in which he refers to the use of a Rothamsted type trap, we have been prompted into writing the following upon the use of such traps.

The survey was primarily designed in order to investigate the movements of immigrant moths, and those species of moth which could be damaging to crops. It is also claimed to be of value in conservation, as farmers would be able to be more selective in their spraying if the movements of harmful species were more accurately known. As such we have no quarrel with the survey's objective, although we are a little doubtful about its potential value to conservation. The traps use a 200W. tungsten bulb and all the insects entering are killed, a number of dubious arguments being advanced to justify this, namely (1) That trap operators do not have the time to identify the moths when they are alive, and that because some people cannot identify them at all, it is necessary to send away the catch for identification. (2) That "it has been shown" that it is almost impossible to wipe out any moth population by intensive trapping. (3) That the number killed is only a small proportion of that accounted for by cars. (4) That because a 200W. tungsten bulb is used, only a small sample of the local population is caught. (5) That some moths when released do not survive anyway.

Our contention is that not only is the killing of the whole catch unjustified, but also that it will prove damaging, although being collectors ourselves this is based on conservation, not moral, grounds. Firstly, it seems reasonable to suppose that anyone agreeing to operate one of these traps should have the knowledge, time and interest to count and identify for them-